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HURRICANE HARVEY MANAGEMENT REPORT

Information contained in this report reflects HQ and regional reporting from the most recently completed operational period as well as other reports provided by HQ, regional and interagency sources. The Senior Leadership Briefing and DHS Component Actions Reports are attached.

National Incident Management Objectives

- Objective 1: Ensure that health and safety of the EPA response is considered at all times.
- Objective 2: Establish an incident management structure and processes employing the Incident Command System to enable effective overall management of the event with deployment of resources (staff and equipment) in a rapid, aggressive and well-coordinated manner.
- Objective 3: Ensure prompt Review and Processing of Fuel Waiver requests.
- Objective 4: Prepare for and provide Rapid Assessment of Industrial facilities as requested by the State or under EPA's statutory program responsibilities for CERCLA Superfund, RMP and FRP facilities. Working with our state partners, contact industrial sources within the impacted area to determine their operational status and determine what support can be provided with the monitoring of the start-up of industrial sources.
- Objective 5: Prepare for and provide Rapid Assessment & Technical Assistance Drinking Water & Wastewater facilities as requested by the State or local government. EPA will support our state partners in contacting drinking water and waste water systems.
- Objective 6: Prepare a Sustained Response Plan that outlines the resource and equipment needs for a long duration response.
- Objective 7: Activate the Agency's Crisis Communication Plan to insure effective and efficient coordination of all incident communications.
- Objective 8: Encourage a collaborative federalism approach, where national, state and local governments interact cooperatively and collectively to solve common problems.
- Objective 9: Begin Agency internal and external coordination, under the National Disaster Recovery Framework, regarding Recovery Support Functions in which EPA is likely to be involved.

Executive Summary

- The Texas Commission on Environmental Quality (TCEQ) submitted a request to FEMA to amend the Emergency Support Function (ESF-10) Mission Assignment (MA) for an additional \$7.5 million. If approved, total funding for assessment and response will be \$17.5 million.
- EPA and TCEQ field observation teams will observe debris staging and landfill operations within the hurricane impacted counties in Texas to ensure best practices and program requirements are being met. The state estimates debris will total approximately 200 million cubic yards. Observations began in Houston on September 14th; observations will begin in Corpus Christi on September 18th. A federal Debris Management Taskforce has been established at the JFO in Austin and EPA is a member of the Taskforce.
- EPA, FEMA and TCEQ are recovering and staging orphan containers for proper disposal. The Corpus Christi Branch expects to complete activities on September 15th. Containers on the staging pad will be transferred to Houston Branch. The Port Arthur/Beaumont Branch is projected to complete recovery activities by early October and the Houston Branch by Mid-October.
- A total of 625 drinking water and 441 wastewater assessments were performed. Of the 2,022 systems designated for follow up, EPA's collaborative work with the state has ensured the return of 1,945 community water systems to fully operational status. These systems cover 99% of the population in the greater Houston area (7.23 out of 7.26 million served). The remaining system restorations and lifting of boil water notices oversight will be transitioned to the TCEQ regional offices. EPA assessment teams completed their emergency assessments and will demobilize on September 15th.
- Sampling at the 9 Louisiana Superfund sites will be completed today, September 15th. (Highland Acid Pits, United Creosote, Conroe Creosoting, Tex Tin, Sheridan Disposal Services and Brio Refining conditions do not appear to be impacted by the storm.) EPA's dive team will collect samples at the San Jacinto Waste Pits Superfund site today to ensure the temporary cap of the site did not release contaminants. The responsible party continues to repair the armored layer of the cap.
- EPA has concluded that the probable source of benzene and volatile organic compound readings in Houston was a roof failure and spill from a light crude storage tank at the Valero Houston Refinery. EPA conducted a facility RMP inspection and issued a Clean Air Act Section 114 information request to Valero on September 14th.
- Trace Atmospheric Gas Analyzer (TAGA) conducted air monitoring assessments of three facilities near Deer Park that have claimed force majeure under existing consent decrees due to damage from Hurricane Harvey. Today TAGA will assess four facilities near Baytown, Texas.

Region 6 Significant Activities:

The R6 Region Emergency Operations Center (REOC) is currently activated and working under a limited Emergency Support Function (ESF) 10 FEMA Mission Assignment (MA). EPA has received MAs for over \$10.3 million for recovery operations to include assisting TX with drinking water, wastewater, and hazmat recovery operations. FEMA announced plans to fund mission assignments in five day increments.

Mission Assignment Number	Funding Amount	Description of Assignment
MA4332DRTX3	\$10,092,000	R6 Field Ops incl. assessing drinking & waste water infrastructure, implementation of Response Manager tracking system, response to hazardous substance releases and oil discharges.
MA4332DRTX1	\$275,000	Deployment of EPA to various locations, including but not limited to TX EOC and the FEMA RRCC to support response operations.
Total Funds	\$10,367,000	

Number of R6 Personnel Involved:

Personnel	EPA R6 Dallas	FEMA Denton	Texas JFO Austin	TX SOC Austin	TCEQ Austin	Houston	Corpus Christi	Beaumont/Port Arthur	Totals
R6	57	0	3	2	0	74	13	8	157
START	9	0	0	1	0	7	13	9	39
ERRS	0	0	0	0	0	27	4	11	42
Other Contractor	1	0	0	0	0	0	0	0	1
TOTAL	67	0	3	3	0	108	30	28	239

Debris Recovery Operations:

Starting on September 15th, EPA and TCEQ field observation teams will perform observations of debris staging and landfill operations within the hurricane impacted counties in Texas to ensure best practices and program requirements are being met.

Container Recovery Operations:

This chart includes daily and cumulative data on container recovery.

Waste Received at All Staging Pads to Date					
	CONTAINERS			Cylinders	TOTAL
	Drums [55 gals]	Small Containers [<55 gals]	Large Containers [>55 gals]		
9/14/2017	26	38	0	5	69
TOTAL TO DATE	268	170	17	62	517

Houston, TX:

On September 12th, EPA received a report from PCI Nitrogen (formerly Agrifos) in Pasadena that storm water run-off from Hurricane Harvey had caused a section of a retaining wall on the plant grounds to collapse. An Assessment Team investigated the report on September 13th and determined there was no Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) reportable release.

Vector Control: Department of Defense (DOD) spray applied pesticides September 13th in three counties (Jefferson, Chambers and Brazoria). Since September 9th DOD has treated 853,147 acres.

Beaumont, TX:

The Hazard Evaluation Team conducted assessments and identified targets in Rainbow Marina, Blue Bird Boat Ramp, Cypress Swamp, and the area south from Sea Rim State Park to McFaddin Beach. Multiple targets may not be recoverable due to terrain, obstructions, water depth, or location on federal property.

The Oil Container Recovery Teams retrieved accessible targets from North Harbor Loop in Lower Sabine River, in the Cities of Vidor and Orange, and at the Beaumont Yacht Club. The Air Operations Group flew over Vidor, Texas and identified 7 new targets for recovery.

Corpus Christi, TX:

The Oil Discharge Assessment Team reviewed salvage plans for the towing vessel Sabine Pass on San Jose Island. In addition, the team oversaw the Responsible Party's contractor pumping air into the ballast and fuel tanks of the Signet Enterprise. The team monitored the containment area surrounding the vessel to ensure that no discharge was occurring. Salvage operations will resume on September 14th. The Oil Discharge Recovery Teams coordinated and monitored Responsible Party led recovery operations and prioritized threats to the environment for removal in Rockport, Rockport Harbor, Fulton Harbor, Key Allegro, and Cove Harbor.

Vector Control: On September 13th, the Texas Department of State Health Services (TX DSHS) contractor completed pesticide spray operations (in the following counties: Lavaca, Kleberg, Jim Wells, and Kennedy).

Emergency and Field Response Operations:

R6 continues to collect and stage recovered orphan containers. They anticipate completion in Corpus Christi, Houston, and Beaumont over the next 30 days.

Daily/Cumulative Summary of Hazard Evaluations/Recovery				
Status	Opened		Closed	
	9/14/2017	Number of Targets Remaining Open	9/14/2017	Cumulative
Corpus Christi Branch	5	5	3	97
Houston Branch	60	104	130	258
Port Arthur/Beaumont Branch	1	1	0	0
NRC Reports	42	45	21	67
TOTALS	108	155	154	422
Note: Open means the target is yet to be recovered. Closed means the target was recovered/left in place or access was denied to collect the item.				

FIELD TEAMS ON 9/13/2017				
Teams	Alpha	Bravo	Charlie	TOTAL
Hazard Evaluation	1	1	2	4
Oil Discharge Assessment	2	5	1	8
ER/Orphan Container Recovery	1	17	3	21
Oil/Vessel Recovery	4	2	0	6
Staging Areas	1	1	1	3
Air Operations	0	1	0	1
Air Monitoring	0	1	0	1
Water Infrastructure Assessment – Drinking Water	0	5	0	5
Water Infrastructure Assessment – Wastewater	0	6	0	6
TOTAL	9	39	7	55

Daily/Cumulative Summary of Spills/Discharges (NON-VESSELS)				
Status	Opened		Closed	
	9/14/17	Number of Facilities/Spills Remaining Open	9/14/17	Cumulative
Corpus Christi Branch	0	0	0	33
Houston Branch	0	7	1	71
Port Arthur/Beaumont Branch	1	10	1	13
NRC Reports	8	27	16	96
TOTALS	9	44	18	213

EPA Headquarters Significant Activities:

The HQ EOC is activated to Level 1 in support of the Region 6 response to Harvey. The HQ EOC is coordinating with Region 6 and other Federal agencies. The HQ EOC has deployed personnel to the FEMA NRCC to staff the ESF-10 desk. EPA Senior Management that comprise the Policy Coordinating Committee (PCC) developed and issued senior management objectives that form the basis of field strategy and tactics in response to Harvey.

Headquarters Mission Assignments:

Mission Assignment Number	Funding Amount	Description of Assignment
MA4332DRTX1	\$10,000	FEMA HQ ESF-10 Desk Support
4332DRTXEPA02	\$40,000	FEMA HQ ESF-10 Desk Support
Total Funds	\$50, 000	

Number of HQ Personnel Involved in the EOC:

Personnel	AO	OAR	OCFO	OCSPP	OECA	OEI	OGC	OLEM	OP	ORD	OW	ATSDR	Totals
Employees	1	0	0	0	4	1	1	13	0	1	1	1	23
Contractors	0	0	0	0	0	5	0	3	0	0	0	0	8
TOTAL	1	0	0	0	4	6	1	16	0	1	1	1	31

Superfund NPL Sites:

EPA provided oversight to potentially responsible parties (PRPs) and independently started collecting samples at 34 TX Superfund Sites and nine LA Sites to confirm no releases due to storm impacts. EPA teams, along with PRPs, completed sampling at 26 sites. On September 14th, teams completed all sampling in Texas and Louisiana, except one site in Louisiana that will be sampled September 15th. EPA also expects to have preliminary results for sites located in TX by September 16th and for the sites located in LA by September 18th.

All 43 Federal Superfund NPL Sites in the affected area have been assessed. Of these, 41 sites have been cleared, and two sites (San Jacinto Pits and

US Oil) require additional follow-up.

San Jacinto Waste Pits:

- San Jacinto Waste Pits Update: The EPA and the responsible party continue to develop a sample plan for areas identified as missing armor stone. Rock placement and cap repairs above water are complete. The underwater cap areas missing armor stone will be repaired following the EPA Dive Team's assessment and sampling work. Installation of temporary fencing for site security is complete.
- US Oil: The PRP continues pump-down operations to maintain freeboard. Since the time the pump-down operations began, the PRP has removed approximately 305,000 gallons of storm water from the site. At the request of EPA, the PRP performed additional site inspections on September 13th and nothing unusual was found.

Texas A&M Superfund Research Grant:

Texas A&M's Houston Campus runs a Superfund Research Program under an EPA grant to do the following emergency response evaluation: *Comprehensive Tools and Models for Addressing Exposure to Mixtures during Environmental Emergency-Related Contamination Events*. Texas A&M started sampling in Houston prior to Harvey, and, when they saw the storm coming, collected additional environmental samples. Texas A&M is planning to re-sample in those areas and evaluate the change. Texas A&M's Superfund grant was awarded this current fiscal year in an effort to develop tools and models for EPA.

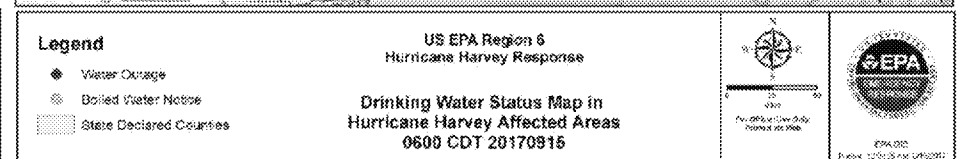
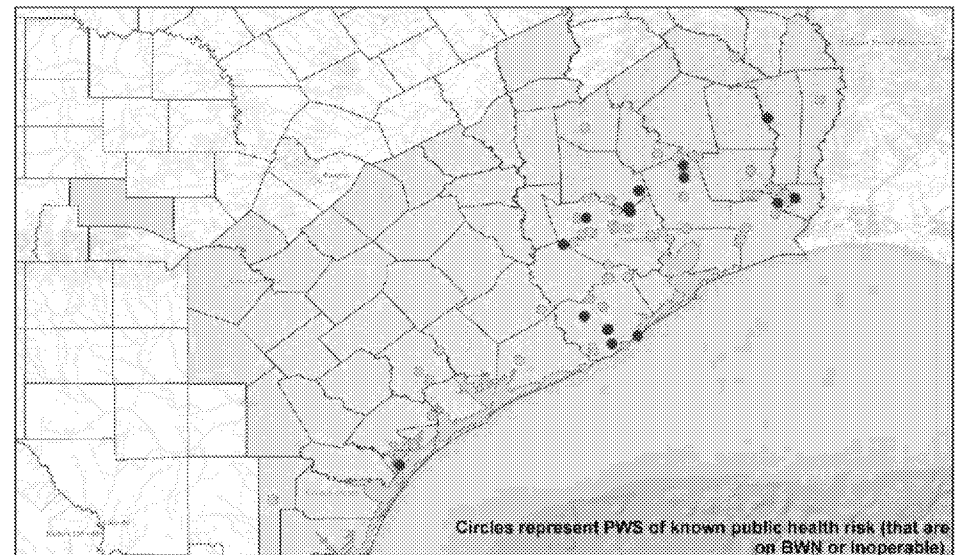
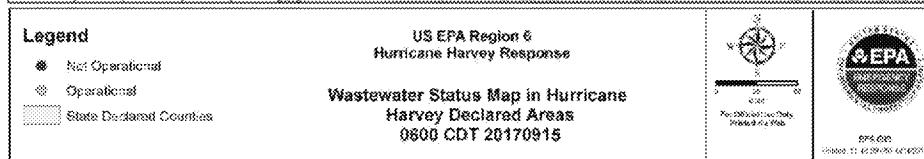
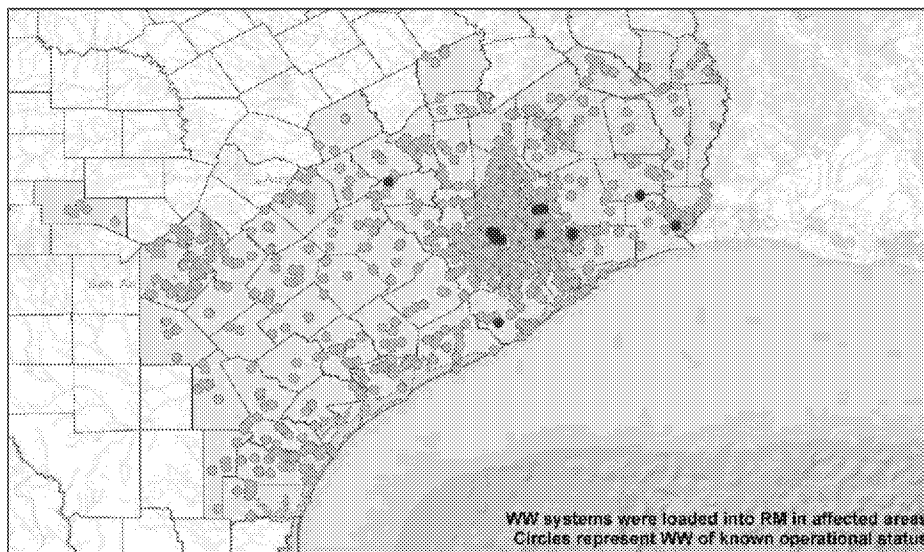
Air Monitoring

On September 14th TAGA conducted monitoring in areas around industrial facilities, including the Shell Deer Park Refinery, Shell Deer Park Chemical Plant, and Vopak Deer Park. Lyondell Basell. No readings were above the TCEQ Air Monitoring Comparison Values short-term screening levels.

Drinking Water/Wastewater Assessments:

EPA continues to support to TCEQ for drinking water and wastewater system assessments. See maps below for details.

Drinking Water and Waste Water Assessments (September 14 th)		
Assessment Types	Daily Assessments	Total Assessments
On-Site DW Assessments	51	625
On-Site WW Assessments	39	441
Phone DW Assessments	300	6754
Phone WW Assessments	27	4639



Other EPA Activities

Fuel Waivers:

Affected State	Waiver Request	Date Received	Status Talking Point	Waiver Response
Reid Vapor Pressure Requirements Waivers				
TX	Letter from TCEQ requesting a waiver of the RVP, RFG and TxLED standards in the Governor's Disaster Proclamation	8/25/17	Granted on 8/25/17 Extended to 10/1/17	https://www.epa.gov/newsreleases/epa-acts-continue-waiver-fuel-requirements-texas
GA	Amended letter from GA Department of Natural Resources for Atlanta RVP to waive 7.8 RVP requirement to 11.5 RVP	8/29/17	Granted on 8/29/17	https://www.epa.gov/enforcement/louisiana-fuels-waiver
LA	Letter from LA governor requesting a waiver of the low RVP requirements.	8/28/17	Granted on 8/28/17	https://www.epa.gov/sites/production/files/2017-08/documents/louisianafuelswaiver082817.pdf
AR	The state is drafting a waiver request to temporarily waive the requirement for low 9.0lb RVP fuel.	8/31/17	N/A	N/A
OK	A statewide low RVP fuel waiver request was submitted and then the request was amended.	8/28/17	8/30/17	https://www.epa.gov/enforcement/second-multi-state-fuels-waivers
Dyed NRLM Diesel Fuel Waiver				
TX	Letter from TX comptroller requesting a waiver of using dyed NRLM diesel fuel in motor vehicles.	8/29/17	Granted on 8/29/17; IRS expanded to cover all of TX on 9/3/17	https://www.epa.gov/enforcement/texas-diesel-waiver
Florida	Florida Department of Environmental Protection requests use of 15 parts per million sulfur non-road diesel to be used as highway diesel fuel, waiving red dye requirements	9/6/17	Granted 9/6/17 through 9/22/17	URL pending
Low Volatility Conventional Gasoline and Reformulated Gasoline (RFG)				
Multi State*	<p>*CT, ME, MA, NH, RH, VT, DE, DC, MD, NJ, NY, and PA, FL, GA, NC, SC, VA, and WV; all mid-western states located in *PADD 2 - IL, IN, IA, KS, KY, MI, MN, MO, NE, ND, SD, OH, OK, TN, and WI; and all Gulf coast states located in PADD 3 -AL, AR, LA, MS, NM, and TX</p> <p>Issuance of waivers based on requests for the allowance of regulated parties within the listed states to produce, sell, or distribute conventional winter gasoline (including BOBs) with an RVP of 11.5 psi before the addition of any ethanol in any RFG covered area. The waiver for El Paso goes until September 16th due to their State Implementation Plan requirements.</p>	8/30/17	Granted on 8/31/17	https://www.epa.gov/enforcement/second-multi-state-fuels-waivers

***PADD: Petroleum Administration for Defense Districts**

Communications:

The Crisis Communication Plan remains activated. EOC PIO continues to work on developing fact sheets on issues regarding the recovery including how to handle household hazardous waste and other debris. R6 PIO and Data Management created a *Region 6 Hurricane Harvey - Public Story Map*. The map is located at this link: <https://epa.maps.arcgis.com/apps/MapJournal/index.html?appid=fadbae6b2832436fb65ca497bd75b9a6>

EPA issued a news release announcing that Administrator Pruitt approved a request from the State of Texas to continue to waive requirements for fuels in Texas through October 1. <https://www.epa.gov/newsreleases/epa-acts-continue-waiver-fuel-requirements-texas>

Guidelines on Debris Management: a flyer designed for home owners, was distributed through social media and to congressional offices, industry, environmental justice and community contacts. The guidelines include directions on correctly separating debris and on locating debris curbside for pickup.